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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,636	04/22/2004	Martin Lund	14219us03	7063

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EXAMINER	
JEANGLAUDE, JEAN BRUNER	

ART UNIT	PAPER NUMBER
2819	

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/829,636	LUND ET AL.	
	Examiner	Art Unit	
	Jean B Jeanglaude	2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-13 and 15-18* is/are rejected.

7)☒ Claim(s) *5 and 14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1 – 4, 6, 9 – 13, 15, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang (US Patent Number 6,427,219) in view of Widmer (US Patent Number 6,198,413).

3. Regarding claims 1, 9, 10, 18, Yang discloses a method for processing information in a primary communication channel (fig. 1), the method (fig. 1) comprising an encoder (100, fig. 1) that encodes at least a portion of at least a first word of at least one packet in a datastream (fig. 1; col 4, lines 40 - 55) and the encoded signal is received by a channel communication (104, fig. 1) and then fed the encoded signal to a

receiver (112, fig. 1) where the signal is processed; a secondary channel communication (fig. 1). Yang's system does not disclose the system that reverses a running disparity of the encoded at least a portion of the at least a first word of the at least one packet in the datastream. However, Widmer, in the same field of endeavor, discloses a method (figs. 4, 5) that comprises encoders (4002, 4004, fig. 4) that sends block disparity to a disparity control (4006) which provided coded data (figs. 4, 5) which are decoded by decoders (5002, 5004) which perform the reverse function of the encoders (4002, 4004, fig. 4), thereby reverse the running disparity of the encoded input signal (input word) and one ordinary skill in the art would have used the combination of Yang and Widmer as a readable machine. Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify Yang's system with that of Widmer in order to perform bit coding, disparity and complementation determinations in parallel to minimize encoding time and logic levels.

4. Moreover, regarding claims 2, 6, 11, 15, Yang discloses the limitations as discussed above except the machine-readable storage and method wherein the at least one encoder reversing the encoded negative RD(-) if the encoded running disparity of the running disparity to RD encoded at least a portion of the at least a first word is RD positive RD(+); and the at least one encoder reversing the encoded running disparity to RD positive RD(+) if the encoded running disparity of the encoded at least a portion of the at least a first word is RD negative RD(-) (claims 2, 11); a method wherein the at least a first word is one of a data word, control word and idle word corresponding to a data packet, a control packet and an idle packet, respectively (claims 6, 15). However,

Widmer, in a related field, discloses a coding system and method where the at least one encoder reversing the encoded negative RD(-) if the encoded running disparity of the running disparity to RD encoded at least a portion of the at least a first word is RD positive RD(+) (figs. 4 – 9; col 11, lines 31 – 41; col 20, lines 12 - 38); and the at least one encoder reversing the encoded running disparity to RD positive RD(+) if the encoded running disparity of the encoded at least a portion of the at least a first word is RD negative RD(-)(figs. 4 – 9; col 11, lines 31 – 41; col 20, lines 12 - 38); Widmer also discloses a method wherein the at Least a first word is one of a data word, control word and idle word corresponding to a data packet, a control packet and an idle packet respectively (fig. 7). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify Yang's system with that of Widmer in order to perform bit coding, disparity and complementation determinations in parallel to minimize encoding time and logic levels.

5. Regarding claims 3, 4, 12, 13, Yang discloses a method (fig. 1) , further comprising assigning n bits of information to each of the at least a first word, where n is greater than or equal to 1 (fig. 1) [the system in figure receives a number of information bits of which the transmitter 110 is used as a packeting data to packet control, voice, data bits into information burst which by then assigns the input information as code word](see col 4, lines 47 – 55] and the combination of Yang and Widmer would generate a 2^n-1 enhanced words having reverse running disparity.

6. Claims 7, 8, 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang (US Patent Number 6,427,219) in view of Widmer (US Patent Number

6,198,413) as applied to claim 25 above, and further in view of the applicant's admitted prior art.

7. Regarding claims 7, 8, 16, 17, Yang and Widmer discloses the system and method as discussed above except the system and method in which the at least one encoder dynamically resizes a number of words utilized for the encoding between the first word and a second word of the at least one packet and the system and method in which the at least one encoder randomly selects the first word from a corresponding first packet and randomly selects the second word from a corresponding second packet. However, it is disclosed in the applicant's admitted prior art a system and method (figs. 1, 2) in which the at least one encoder dynamically resizes a number of words utilized for the encoding between the first word and a second word of the at Least one packet (fig. 2) and the encoder (103, fig. 1) randomly selects the first word from a corresponding first packet and randomly selects the second word from a corresponding second packet (page 2, last paragraph). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yang and Widmer's system with that of the applicant's admitted prior art in order to encode and decode an input information.

Allowable Subject Matter

Claims 5, 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: in combination with other limitations of the claims the prior arts made of record fail to suggest a system and method in which at least a first word having a reversed disparity comprising a secondary channel overlaid on a primary communication channel.

9. Incorporating the aforementioned limitations in the independent claims will raise double patenting issue.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Tomlinson (US Patent Number 4,575,709) discloses a signal encoding-decoding apparatus.

12. Dorward et al. (US Patent Number 5,825,976) discloses a device and method for efficient utilization of allocated transmission medium bandwidth.

13. Bucht (US patent Number 6,392,570) discloses a method and system for decoding 8-bit/10 bit data using limited width decoders.

14. DeMartin et al. (US patent Number 6,421,527) discloses a system for dynamic adaptation of data/channel coding in wireless communications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B Jeanglaude whose telephone number is 571-272-1804. The examiner can normally be reached on Monday - Friday 7:30 A. M. - 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jean Bruner Jeanglaude
Primary Examiner
August 8, 2004